



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------------------------------------------------------------------|-------------|----------------------|-------------------------|------------------------|
| 09/458,319 | 12/10/1999 | AIDAN JAMES SMYTH | 60136.0087USU1 | 8719 |
| 23552 7590 10/07/2009 MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903 | | | EXAMINER RAMAN, USHA | |
| | | | ART UNIT 2424 | PAPER NUMBER |
| | | | MAIL DATE 10/07/2009 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/458,319 | Applicant(s) SMYTH ET AL. | |
| | Examiner USHA RAMAN | Art Unit 2424 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-12 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-12 and 15-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 25th 2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 8 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day et al. (US Pat. 5,996,015) in view of Chowdhury et al. (US Pat. 6,026,439), DeMoney (US Pat. 6,065,050), Katinsky et al. (US Pat. 6,452,609), Duso (US Pat. 5,892,915) and Ullman et al. (US Pat. 6,018,768).

In regards to claims 8 and 16, Day discloses an information distribution system including provider equipment (201) and subscriber equipment (203), wherein provider equipment communicates to said subscriber equipment information streams including content requested by said subscriber equipment (see column 3, lines 10-20 and lines 43-46), comprising:

A session manager (presentation formatter), for interacting with said subscriber equipment and maintaining a plurality of play lists (clients may make selection of one or more assets, and further multiple data pumps service a plurality of clients by streaming data to a plurality of clients, therefore multiple play lists are generated for each of plurality clients, see column 3, lines 30-31, lines 43-47, and lines 55-58) wherein each playlist (i.e. provides stream control functions for controlling the playback of media. See column 3, lines 58-61, column 4 lines 1-2 and column 5, lines 43-45) is associated with a respective subscriber, said playlist defining plurality of content streams to be provided to the subscriber ("selected video segments", see column 6, lines 28-29). The play list is active during a session, wherein the play list is accessed through various points during the session for determining the next media clip. As such the play list needs to be cached through the duration of the session so that it can be referred back to during such various points in the session. The session manager therefore necessarily "stores" (by caching) the generated play list at the server while the session is alive, so that access to the play list to determine the next media clip is facilitated.

A server for storing content streams (data pump 111 stores multimedia assets. See column 3, lines 43-45); and

A server controller (control server 211) for retrieving from said server, content streams defined by said playlist, said content streams being sequentially provided to said subscriber equipment (see column 5, lines 45-54, column 6, lines 40-50);

Day also discloses that during the playback of clips from a playlist the system determines if additional clips in the playlist are present, and in the event there are additional clips, it retrieves the additional clips and concatenates it to the current clip so that the clip maybe played seamlessly. See Day: column 6, lines 36-64.

Furthermore, while the session is active, the system checks for additional clips in the playlist, to determine if additional data needs to be retrieved. Therefore, the system also comprises the step of “continuously accessing playlist” while the session is active, in order to determine when the next clip needs to be retrieved in order to be streamed to the user.

Day discloses that at a predetermined time prior to the completion of current clip, the next segment is to be “initialized” for seamless transmission without any delay, and therefore discloses communicating an indication of the next content to be provided to the subscriber equipment. Day is silent on communicating a “termination notification” from a server controller to a session manager. Day is additionally silent on the step of maintaining the playlist at the session manager after content streams defined by the playlist have been provided to subscriber element.

In analogous art, Chowdhury discloses a method of streaming files in a play list. A file exporter is created by a command processor communicates with the play list to determine the "next" segment that is to be transferred. Chowdhury shows issuing a termination notification signaling that a next file from the play list can be queued for transfer, and in response preparing the next file in the play list to be queued for transfer (function call: IOCTL(CTL_QUEUE, FILE_INFORMATION). See column 7, lines 58-65, column 8, lines 57-column 9, line 3. Chowdhury is therefore evidence of issuing a completion notification when buffering of a first file has completed and buffering of the queued file must begin.

Duso further discloses the step of identifying the next segment when pre-fetching the track from playlist (fig. 12, item 131 and col. 58-66).

It would have been obvious one of ordinary skill in the art to implement Chowdhury's and Duso's teachings in the system of Day, so that a termination notification signaling is transmitted by the control process in response to a remaining portion of a current content stream being below a threshold, communicating the notification to the session manager to receive an identification of the next content in play list to be provided to the subscriber equipment so that the next content in the play list can be prepared for transfer without delay to the subscriber.

While the modified system shows controlling the playback of a content stream using VCR style functions (see column 5, lines 43-45), Day is silent on how VCR style functionalities are achieved. The system therefore is silent on the step of associating a "fast forward" and reverse stream with the content streams. The

Art Unit: 2424

system of Day additionally lacks the step of modifying the play list in response to play list modification commands wherein the next stream in the playlist is spliced at an entry point associated with an exit point of a current stream being sent to the subscriber equipment.

In a similar field of endeavor, DeMoney details on implementing VCR style functions. DeMoney teaches accomplishing VCR style functions by maintaining normal play stream with a look up table and associating the trick play streams (such as fast forward and fast reverse streams) with the content stream wherein the media server switches the playback from the content stream to the respective trick play stream associated with the content stream in response to trick play commands received from the user. Note column 4, lines 59-67 and column 5, lines 1-60 of DeMoney. DeMoney further discloses that switching of streams occurs only at well-defined "random-access" points (i.e. splicing points) that are identified within the transport packet headers of the content stream. Note column 5, lines 47-52, column 9, lines 25-30. An index table contains a list of the offset points that marking the location of the random access points (i.e. the entry and exit points) for the plurality of trick play streams and content stream. During the operation of a trick play function, the media server looks for an offset in the trick play stream (i.e. an entry point in the trick play stream) that corresponds to the current output offset in the content stream and switches the playback to the trick play stream at that entry point. Note column 10, lines 31-53.

In a further analogous art, Katinsky teaches a user-friendly media player interface that initiates and manages a session with content provider (i.e. "session manager") by creating and maintaining a sequencer (play list) with content streams to be played at the subscriber equipment, where the media player further allows the user to modify the play list. Note column 3, lines 43-54 and column 4, lines 10-20 of Katinsky. Using the media player interface, the subscriber can modify the play list by adding or deleting content streams as well as skip forward and backward to a content stream to be played. Note column 6, lines 19-26 and column 2, lines 55-57 in Katinsky. Katinsky further notes that playlists maybe saved (col. 2, lines 37-41).

In a further related art, Ullman additionally discloses saving such playlists at server for subsequent access by users. Col. 10, lines 55-58. Accordingly storing such a playlist maintains the playlist after content streams defined by playlists have been provided to subscriber equipment

One of ordinary skill in the art would have immediately recognized that implementing the "skip" function of Katinsky as described in column 6, lines 19-26 would require content stream comprising random access points as exemplified in DeMoney to enable the exit of a current content stream prior to its end and entry to the next content stream for playback and additionally implementing a method for storing playlist as taught by Katinsky and Ullman would allow user to retrieve a stored playlist would allow a user to retrieve a playlist again in the future after it has been used once. Furthermore, Day also discloses that each media segment comprises attributes that can include any information describing the asset (see Day

Art Unit: 2424

column 4, lines 17-23). Katinsky further illustrates the playlist identifying content attributes (see figure 5). As such examiner notes that both Katinsky and Day provide sufficient evidence to one of ordinary skill in the art at the time of the invention that attributes associated with a segment were identified or associated in a playlist.

All the claimed elements were known in the Day, DeMoney and Katinsky references and one ordinary skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions and the combination would have yielded predictable results at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the trick play streams associated with the content streams as taught by DeMoney in the system of Day thereby providing efficient trick play functionality. Such a modification would be realized with the use of MPEG format content stream, comprising "random access points" set within the transport packet header as taught by DeMoney enabling switching of trick play streams and content stream in response to user commands. It would have been further obvious to one of ordinary skill in the art at the time of the invention to employ Katinsky's playlist modification commands for enabling user to switch between content streams in a playlist thereby providing enhanced playlist functionalities to the user. Such a modification again, would be realized with the use of MPEG format content stream, comprising "random access points" set within the transport packet header as taught by DeMoney enabling exit of a current content stream prior to its end and entry to the next content

Art Unit: 2424

stream for playback that is taught by Katinsky. The index file in the modified system identifying the forward and the reverse streams would be the “additional information describing the content” and as such would be identified by the playlist as an “attribute” corresponding to the content, as taught by Day and Katinsky.

In further regards to claim 16, Day further discloses that the playlist is generated at the provider equipment. See column 6, lines 14-30 in Day. Furthermore, the session manager of the modified system controls the media session in response to all the user commands, including playlist modification commands.

In regards to claims 9 and 17, the modified system of Day in view of DeMoney and Katinsky provides modification commands such as fast forward, fast reverse as well as skip forward and skip backwards commands (see column 6, lines 19-26 in Katinsky).

In regards to claims 10 and 18, the modified system of Day in view of DeMoney and Katinsky provides a session manager with “add” and “delete” functionalities that allow media objects to be added or removed from the play list. Note column 2, lines 55-57.

In regards to claim 11, the modified system of Day in view of DeMoney and Katinsky provides a session manager with skip forward and skip backward functionalities to skip to next or previous clip in the play-list. Note figure 7, reference numbers (106) and (107) and description in column 6, lines 19-26 of Katinsky.

In regards to claims 12 and 19, the modified system of Day in view of DeMoney and Katinsky provides a session manager with trick play functionalities that allow a fast reverse and fast forward stream to be associated with the content stream in response to fast forward and fast reverse commands. Note column 5, lines 25-60 of DeMoney.

In regards to claim 15, Day shows that the multimedia files in the modified system are striped across disks of a plurality of storage servers. Note column 3, lines 15-20, lines 39-67, and column 4, lines 23-30 of Day. The data pump acts as the “transport processor”, where under the control of the server controller, delivers the media assets to the subscriber equipment.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Morgan et al. (US Pat. 5,924,071).
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to USHA RAMAN whose telephone number is (571)272-7380. The examiner can normally be reached on Mon-Fri: 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2424

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Kelley/
Supervisory Patent Examiner, Art
Unit 2424

/Usha Raman/